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PATENT



SPECIFICATION

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*Complete Accepted, July 11, 1918.*

COMPLETE SPECIFICATION.

Improved Apparatus for Rapid Drawing of Circles of Given Diameters.

I, NICOLAS BASILE COSTOVICI, formerly of Lausanne, Switzerland, and now of No. 17, rue du Mont Blanc, Geneva, Switzerland, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to an apparatus for rapid drawing of circles of given diameters of the type which comprises a ruler or straight edge which is provided with holes distributed according to a scale along the length of the ruler. Of these holes one hole serves to receive a centre pin which is to be inserted through the ruler into the drawing surface, whilst the other holes serve for the insertion of a drawing stylus, so that by rotating the ruler around the centre pin the drawing stylus will describe a circle of determined diameter upon the drawing surface.

The present invention consists in forming the hole serving for the reception of the centre pin in a plate which is adjustable along a scale in the longitudinal direction of the ruler by means of a micrometer screw.

I am aware that it has been proposed to form a rule with an adjustable slide at one or both ends, the slide having a hole for the pencil or the like, and having means for locking the slide in position after adjustment by means of a set screw.

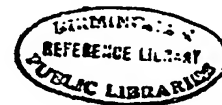
Further the arrangement of a ruler transversely to a perforated ruler has been suggested, the first mentioned ruler being fixed and not made to hinge.

A constructional example of the subject matter of this invention is illustrated in plan in Figs. 1 to 3 of the accompanying drawings.

As shown in Fig. 1, the apparatus consists of a flat ruler or straight-edge *a*. It is provided along one longitudinal edge with a scale. A series of holes 1, 2, 3—22, are formed along the longitudinal centre line. The holes marked 2—22 are situated for instance 5 millimetres apart, and are slightly tapering from top to bottom; they serve to receive the point of a stylus, for instance a lead pencil, drawing pen, or the like.

A slot *b* is formed in the uppermost end of the ruler *a*, and in this slot is inserted a plate *d* constructed as a pointer, and which is adjustable by means of a screw *c*, along a millimetre scale *e* having a length of 5 mm. The plate *d* is formed with a hole along the longitudinal centre line of the ruler, that is to say, in the prolongation of the series of holes 2—22, and this hole is

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designed to receive a centre pin which, in the lowest position of the plate *d*, is situated for instance 1 cm. from the hole 2. This allows of drawing circles of 2—21 cm. diameter; and the plate *d* allows for adjustments 1 to 5 mm.

1 indicates a circular hole of for instance one cm. diameter, so that circles of somewhat smaller diameter can be drawn by running the point of a pencil 5 around the edge of the said hole.

The constructional form illustrated in Fig. 2 differs from the first herein described constructional form by the feature that the scale instead of being provided along the longitudinal edges of the actual ruler *a*, is marked on bars, *f*, *g*, jointed to it at one end. These bars in one end position lie along 10 the longitudinal edges of the ruler *a*, and in the other end position they are extended at right angles thereto with their jointed ends abutting directly against each other. In this manner they extend in line with each other and constitute together a ruler or measure of nearly double the length of the ruler *a*. 15

The same object is effected in the constructional form shown in Fig. 3, by forming the ruler of two bars *a*<sup>1</sup>, *a*<sup>11</sup>, which are jointed together at one end and are corrugated along their facing longitudinal edges. The holes 2—21 are provided alternately in the two bars and are situated in the ridges of the corrugations, so that they will lie in one line when the bars are folded. For 20 drawing circles, the operation of this form of the improved apparatus is the same as in the case of the constructional form shown in Fig. 1. By opening out the bars *a*<sup>1</sup>, *a*<sup>11</sup> from the position shown in full lines into the extended position indicated by dot and dash lines, a ruler is formed of approximately twice the length, and also circles can be drawn of twice the diameter that is 25 possible when the bars are folded.

Instead of being arranged in a straight line, the holes may be arranged in zig-zag fashion.

The holes 23, shown in Figures 2 and 3, form no part of the present invention beyond indicating the position of the adjustable plate *d*, and screw *c* 30 shown in Figure 1.

The ruler may be composed of a plurality of parts which may be connected together, for instance by means of hinges.

The improved apparatus allows of instant drawing of circles of determined sizes without previously marking off from a scale. The improved apparatus 35 combines in itself a pair of compasses, a ruler and a measure all in one instrument. In using an ordinary pair of compasses errors can readily be made in choosing and marking off the diameter of a circle, whereas such errors are not possible when using the apparatus as described and shown, because the sizes of the various diameters are marked by the side of the corresponding holes. 40

The improved apparatus may be made of any suitable opaque or transparent or translucent material, for instance, metal, wood, celluloid and the like.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that 45 what I claim is:—

1. An apparatus of the type hereinbefore described wherein the hole serving for the reception of the centre pin is formed in a plate which is adjustable along a scale in the longitudinal direction of the ruler, by means of a micro-meter screw.
2. An apparatus as claimed in Claim 1, wherein the ruler consists of two 50 bars provided with scales, pivoted together at one end in such a manner that when opened out into their extended position they can serve as a measure of approximately twice the length of the single ruler and wherein the holes for the reception of the drawing pencil are provided alternately in the two bars.
3. An apparatus as claimed in Claim 1, wherein on both sides of the series 55 of holes of a central ruler, bars provided with scales are hinged to one end of

the said central ruler in such a manner that when opened out they will form a ruler extending transversely to the said central ruler.

4. The improved apparatus for rapid drawing of circles of given diameters, constructed and operating substantially as hereinbefore described and also as illustrated in and by the accompanying drawings.

Dated this 3rd day of August, 1917.

MARKS & CLERK.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1918.

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

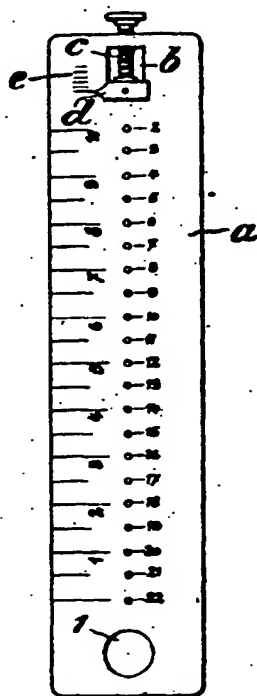


Fig. 2.

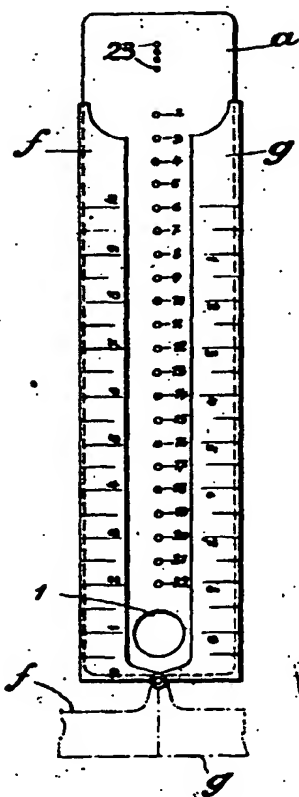
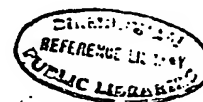
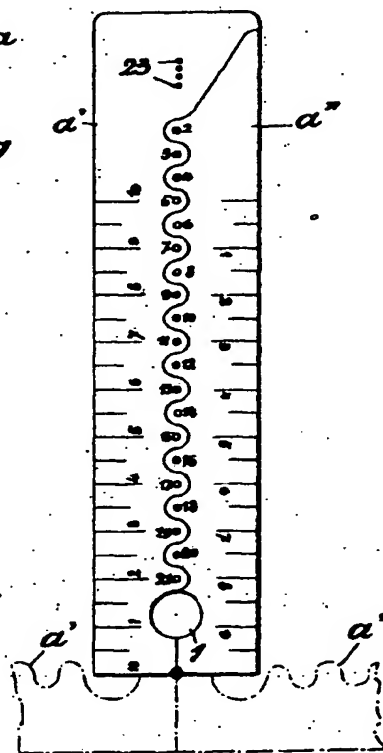


Fig. 3.



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